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United States  
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The U.S. Army Corps of Engineers Temporary Roofing  
and Temporary Power Response to the 2008  
Hurricane Season

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## Acronyms and Abbreviations

ACI	Advance Contracting Initiative
APP	Accident Prevention Plan
FEMA	Federal Emergency Management Agency
IG	Inspector General
NRF	National Response Framework
QA	Quality Assurance
RoE	Right of Entry
USACE	U.S. Army Corps of Engineers



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
400 ARMY NAVY DRIVE  
ARLINGTON, VIRGINIA 22202-4704

September 22, 2009

MEMORANDUM FOR COMMANDER AND CHIEF OF ENGINEERS, U.S. ARMY  
CORPS OF ENGINEERS  
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: The U.S. Army Corps of Engineers Temporary Roofing and Temporary  
Power Response to the 2008 Hurricane Season (Report No. D-2009-105)

We are providing this report for your information and use. We performed this audit based on the commitment of the President's Council on Integrity and Efficiency (now known as the Council of Inspectors General of Integrity and Efficiency) to take a proactive approach in reviewing disaster relief efforts. We considered management comments from the U.S. Army Corps of Engineers on a draft of the report in preparing the final report.

Comments on the draft of this report conformed to the requirements of DOD Directive 7650.3 and left no unresolved issues. Therefore, we do not require any additional comments.

We appreciate the courtesies extended to the staff. Questions should be directed to me at (703) 604-9201.

A handwritten signature in black ink, reading "Richard B. Jolliffe", is positioned above the typed name and title.

Richard B. Jolliffe  
Assistant Inspector General  
Acquisition and Contract Management



# Results in Brief: The U.S. Army Corps of Engineers Temporary Roofing and Temporary Power Response to the 2008 Hurricane Season

## What We Did

We reviewed the U.S. Army Corps of Engineers' (USACE) response to the 2008 hurricane season. Our review was divided into two areas: the temporary roofing mission's quality assurance process and safety requirements, and the current procedures for administering the temporary power mission.

## What We Found

USACE internal controls over quality assurance and safety requirements for the temporary roofing mission and the contract administration procedures for the temporary power mission were ineffective. USACE officials have made improvements to the temporary roofing mission since Hurricane Katrina. However, USACE officials continue to experience problems with the \$36.7 million temporary roofing and \$8.7 million temporary power missions for the 2008 hurricane season for the following reasons. USACE officials did not adequately train all quality assurance inspectors for the temporary roofing mission. One contractor performed the temporary roofing mission without an approved accident prevention plan, while other contractors performed the mission without fully implemented accident prevention plans. USACE districts did not comply with the requirements to develop and retain adequate contract documentation for the temporary power mission.

USACE quality assurance inspectors were not, in some cases, adequately trained or qualified to accurately estimate the time or materials to complete the repair work, potentially adding cost to the overall temporary roofing mission.

The contractor's failure to submit an acceptable accident prevention plan for approval before performing the work or adequately implementing the plan increased the probability of injuries and liability to the Government. Also, contracting officials without expertise in the administration of the 2008 temporary power mission may hesitate to take action in the future or incorrectly perform functions causing delays and inadequate documentation.

## What We Recommend

We recommend that USACE:

- Adequately train all personnel executing the quality assurance responsibilities for the temporary roofing mission.
- Require temporary roofing contractors to have an accepted and properly implemented accident prevention plan before they perform the temporary roofing mission, and to comply with the safety requirements.
- Instruct districts in charge of the emergency power contracts to develop and retain adequate contract documentation.
- Consider consolidating the award and administration of the temporary power mission's Advance Contracting Initiative contract at two regional or district locations.

## Management Comments and Our Response

USACE agreed with all four recommendations. The comments were responsive and no additional comments are required. Please see the recommendations table on the back of this page.

## Recommendations Table

Management	Recommendations Requiring Comment	No Additional Comments Required
Commander, U.S. Army Corps of Engineers		1, 2, 3, 4

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# Introduction

## Objectives

We reviewed the U.S. Army Corps of Engineers' (USACE) response to the 2008 hurricane season. Our review was divided into two areas. Specifically for this project, we reviewed the temporary roofing mission's quality assurance (QA) process and safety requirements, and the current procedures for administering the temporary power mission. See Appendix A for a discussion of scope and methodology and Appendix B for prior coverage related to the objective.

## Background

The audit is based on the commitment of the President's Council on Integrity and Efficiency (now known as the Council of Inspectors General on Integrity and Efficiency) to take a proactive approach in reviewing disaster relief efforts. In addition, the DOD Inspector General (IG) reviewed the award and administration of contracts for ice and water for the 2008 hurricane season. We issued Report No. D-2009-103, "The U.S. Army Corps of Engineers Ice and Water Response to the 2008 Hurricane Season," on September 18, 2009 to address the USACE ice and water missions.

## ***Emergency Guidance***

The "Robert T. Stafford Disaster Relief and Emergency Assistance Act" (Stafford Act) and the 2008 National Response Framework (NRF) provide guidance for Government officials to use during emergency situations. The Stafford Act authorizes the President to provide financial and other forms of assistance to support response, recovery, and mitigation efforts following declared disasters. The 2008 NRF provides structure for effective and efficient incident management among the Federal, State, and local emergency management agencies after a disaster. The 2008 NRF authorizes the Federal Emergency Management Agency (FEMA), part of the Department of Homeland Security, to issue mission assignments. Under the Stafford Act, USACE supports FEMA in carrying out the NRF, which calls on Federal departments and agencies to provide coordinated disaster relief and recovery operations to assist local agencies when local resources and capabilities are exceeded. USACE is the primary coordinator and agency responsible for one of the NRF functions, Emergency Support Function #3, "Public Works and Engineering Annex." USACE is the supporting agency responsible for coordinating activities involved in emergency generator installation under Emergency Support Function #12, "Energy Annex." In addition, USACE assists as a supporting agency in fulfilling mass care requirements, including temporary roofing, under Emergency Support Function #6, "Mass Care, Emergency Assistance, Housing, and Human Services Annex."

## ***Advance Contracting Initiative Contracts***

To expedite a response to emergencies and disasters, USACE developed and implemented Advance Contracting Initiative (ACI) contracts for relief efforts. ACI contracts are awarded prior to disasters, and allow USACE contracting officials to



respond when a disaster occurs by placing delivery orders at a negotiated rate for supplies and services. Each of the awarded contracts is specific to a State, geographical region, or territory of the United States, and contractors can begin mobilization within 24 hours of notification. Agencies meet actual needs by placing delivery orders against the ACI contracts.

### Temporary Roofing Mission

USACE Mobile District, Mobile, Alabama, contracting officials awarded ACI contracts for the temporary roofing mission in 2006. The ACI contracts consisted of unrestricted, 8(a), Historically Underutilized Business Zones, and Service-Disabled Veteran contracts. USACE district contracting officers can issue a task order under any ACI contract during disasters. USACE St. Paul District, St. Paul, Minnesota, contracting officials issued task orders under the ACI contracts for Hurricane Gustav at a cost of \$16.3 million. USACE Galveston District, Galveston, Texas, contracting officials stated that they issued task orders under the ACI contracts for Hurricane Ike at a cost of \$15.1 million. USACE Galveston District officials stated that they also awarded two non-ACI contracts following Hurricane Ike to a Service-Disabled Veteran and 8(a) contractor, and the Galveston District office contracting officials issued task orders under the non-ACI contracts for Hurricane Ike at a cost of \$5.2 million.

The following table shows the temporary roofing contracts including the contract number, the contractor, and associated costs according to USACE contracting officials used in response to the 2008 hurricane season.

**Temporary Roofing Contract Information**

Hurricane	District	Contract No.	Contract Type	Contractor	Amount Paid
Gustav	St. Paul, Minnesota	W91278-06-D-0028*	8(a)	Crown Roofing Services, Inc.	\$9,761,735
Gustav	St. Paul, Minnesota	W91278-06-D-0047*	Historically Underutilized Business Zone	S&M and Associates, Inc.	\$6,570,357
Ike	Galveston, Texas	W91278-06-D-0031*	8(a)	Crown Roofing Services, Inc.	\$10,335,917
Ike	Galveston, Texas	W91278-06-D-0056*	Service-Disabled Veteran	ACME Roofing & Sheet Metal Co., Inc./Industrial Technical Services, LLC Joint Venture.	\$4,799,496
Ike	Galveston, Texas	W912HY-09-D-0002	Service-Disabled Veteran	All American Brothers Company, LLC	\$3,674,779
Ike	Galveston, Texas	W912HY-09-D-0001	8(a)	American Plastic, Inc.	\$1,461,107
*ACI contract					

USACE provides technical assistance to State and local governments and directs Federal assistance in managing and contracting for the installation of blue plastic sheeting on roofs of damaged homes following major disasters. FEMA arranges for the procurement and shipment of sheeting and other supplies as needed to designated staging areas, where USACE accepts and manages the distribution of the materials. In major disasters, FEMA validates eligibility and priority of State Government requests. USACE issues and manages temporary roofing contracts to execute assigned missions and secures right of entry (RoE) for each affected residence. Affected homeowners are required to complete an RoE form, allowing the contractor to inspect the home for eligibility and for installation. FEMA funds the temporary roofing mission through mission assignments. Figure 1 is an example of a completed temporary roof installed by USACE contractor personnel following a disaster.



Source: U.S. Army Corps of Engineers

**Figure 1. Temporary Roof Installed in the Galveston, Texas, District Following Hurricane Ike**

### **Temporary Power Mission**

USACE Pittsburgh District, Pittsburgh, Pennsylvania, contracting officials awarded one competitively bid ACI contract for the temporary power mission to IAP Worldwide Services on December 1, 2002. The contract had a base period of 1 year with four 1-year options, expiring November 30, 2007, when all options were exercised. USACE contracting officers extended the services provided by the contract an additional 6 months through May 31, 2008, in accordance with the contract terms. USACE Pittsburgh District contracting officials further extended the contract services 5 months until the replacement contract was awarded. USACE Pittsburgh District contracting officials awarded three replacement contracts on October 27, 2008, covering three geographic regions. IAP Worldwide Services received the award of the contracts for geographic area I (W911WN-09-D-0001) and geographic area II (W911WN-09-D-0002). Kellogg,

Brown, and Root Services, Inc. received the award for geographic area III (W911WN-09-D-0003). USACE St. Paul District contracting officials stated that they issued task orders under this ACI contract for temporary power following Hurricane Gustav in 2008, totaling \$6.6 million. USACE Galveston District contracting officials stated that they issued task orders under the temporary power ACI contract following Hurricane Ike totaling \$2.1 million.

The NRF allows USACE, at FEMA's direction, to provide local and State governments assistance through management of an emergency power mission including procurement, installation, and operation of generators following major disasters. Local governments' roles and responsibilities are to identify and prioritize critical public facilities and potential power requirements prior to a disaster. The State Governments' responsibilities are to validate, consolidate, and prioritize requests from the affected local governments. FEMA validates eligibility and priority of State Government requests for major disasters, and forwards the requests to USACE. USACE issues and manages emergency generator contracts to execute the assigned mission, conducts preinstallation assessments or validates existing assessments, conducts environmental assessments and remediation of generator installation sites, and secures RoEs as needed. Figure 2 shows USACE contractors during execution of the Hurricane Ike power mission. The contractors are performing checks on the installed generators used during the mission to power a senior citizen housing development.



Source: U.S. Army Corps of Engineers

**Figure 2. Contractors Checking on an Installed Generator During Hurricane Ike**

## **Review of Internal Controls**

DOD Instruction 5010.40, "Managers' Internal Control (MIC) Program Procedures," January 4, 2006, requires DOD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. USACE internal controls over the QA process and safety requirements for the temporary roofing mission and the contract administration procedures for the temporary power mission were ineffective. Implementing Recommendations 1, 2, and 3 will correct these internal control weaknesses. We will provide a copy of this report to senior USACE officials responsible for internal controls.

## **Finding: Temporary Roofing and Temporary Power Missions**

USACE officials have made improvements and have continuously updated the procedures for executing the temporary roofing mission since Hurricane Katrina. However, during the 2008 hurricane season, USACE experienced problems with QA and safety requirements for the \$36.7 million temporary roofing mission, and with the administration of the \$8.7 million temporary power mission. Specifically, for the 2008 hurricane season:

- USACE did not adequately train all QA inspectors for the temporary roofing mission;
- USACE contractors performed the temporary roofing mission without approved or fully implemented accident prevention plans (APP); and
- USACE districts did not comply with the contract requirements to develop and retain adequate contract documentation for the temporary power mission.

As a result, some of the USACE QA inspectors lacked the training and qualifications to accurately estimate time and materials needed to complete the repair work, potentially adding cost to the overall temporary roofing mission. In addition, the contractors' failure to submit an acceptable APP for approval before performing the work or to adequately implement the plans increased the probability of injuries and liability to the Government. Also, contracting officials without expertise in the administration of the 2008 temporary power mission may hesitate to take action in the future or incorrectly perform functions causing delays and inadequate documentation.

### **Improvements to the Temporary Roofing Mission**

USACE officials have made improvements to the temporary roofing mission in response to previous DOD IG recommendations. However, further improvements are needed to better execute this important disaster relief mission. DOD IG Report D-2008-037, "U.S. Army Corps of Engineers Administration of Emergency Temporary Roofing Repair Contracts," December 20, 2007, determined that USACE had an insufficient number of QA personnel because QA duties were performed by volunteers. In response to the report, USACE contracting officials awarded contracts for administrative support at the RoE collection sites and additional QA personnel for the 2008 hurricane season. The USACE Disaster Guidebook, May 2008, emphasizes the need to minimize the use of QA personnel for RoE collection to increase the number of QAs available for estimating and verifying temporary roofs. Because of improvements, roofing contractors were able to complete more roofs in less time than during Hurricane Rita. DOD IG also issued Report D-2007-038, "The U.S. Army Corps of Engineers' 'Operation Blue Roof' Project in Response to Hurricane Katrina," December 22, 2006, which determined that USACE properly awarded and administered the contracts for temporary roofing repairs in response to Hurricane Katrina. The temporary power mission was not reviewed during previous hurricane seasons.

## **Temporary Roofing and Power Issues Identified**

USACE officials made improvements to the temporary roofing mission; however, several areas of concern continue to exist in the temporary roofing mission as well as in the temporary power mission. In some instances, USACE QA roofing inspectors were not given adequate training before deployment to hurricane recovery efforts. USACE officials stated that QA inspectors, in some cases, were USACE volunteers who lacked the expertise to accurately estimate and verify the amount of materials needed for the temporary roofing mission. Also, USACE temporary roofing contractors and their subcontractors were operating without approved or fully implemented APPs. USACE officials did not hold temporary roofing contractors accountable for not following safety requirements in the APP. USACE officials administering the temporary power mission contracts were unfamiliar with the ACI requirements and did not develop or retain all necessary supporting documentation.

### ***Training of Quality Assurance Personnel***

During the 2008 hurricane season, USACE officials, in some cases, relied on QA temporary roofing personnel who had limited training. Inadequately trained USACE QA volunteers were used to inspect and verify the materials and workmanship of the contractors performing the temporary roofing mission. Previous DOD IG recommendations on USACE's QA process suggested decreasing the number of QA personnel and relying more on the contractors' quality control personnel. USACE district contracting officials disagreed, stating that relying more on contractor quality control personnel would lead to more risk with fewer checks and balances. USACE contracting officials also expressed concern that QA inspectors hired without architect and engineering backgrounds are not sufficiently qualified to monitor contractors. USACE officials are concerned with the QA process and are currently working to address the issues for the 2009 temporary roofing ACI contracts.

### **Quality Assurance Personnel Training**

USACE QA temporary roofing personnel, in some cases, were not adequately trained to perform quality assurance inspections for the 2008 hurricane season. QA personnel's training consisted of an overview of FEMA disaster relief efforts and was not necessarily directed at the specific duties of a temporary roofing QA inspector. Personnel deployed during a disaster are allowed only a short time to review a CD-ROM and training manual before executing the duties of a QA inspector for the temporary roofing mission. QA is performed by the Government or authorized representatives to ensure that the homeowner receives a temporary roof in accordance with the mission requirements. The duties for QA personnel in accordance with mission requirements are to:

- represent USACE during temporary roofing missions,
- verify eligibility and initial estimates,
- inspect contract work for quality and safety, and
- verify actual quantities for payment and progress reporting.



USACE officials stated that the insufficient training of some QA personnel for the 2008 temporary roofing mission resulted in inaccurate estimates of materials and in the covering of roofs that were not eligible under FEMA regulations. In addition, USACE officials stated that an insufficient number of qualified personnel were available during the 2008 hurricane season to verify the roofing estimates and calculations of the contractors. USACE officials should ensure that all temporary roofing QA personnel are sufficiently trained and qualified before deployment for a disaster relief event.

### **USACE's Planned Corrective Action for Quality Assurance Personnel Training Issues**

USACE officials are working to address deficiencies in the QA process by placing an increased emphasis on hiring QA personnel with engineering backgrounds, defining and rewriting QA job descriptions, and improving QA training.

USACE officials have prepared a list of engineering and administrative contractors for USACE districts in hurricane zones. The list will aid USACE officials in identifying qualified personnel available at the time of a disaster and ensure that qualified QAs are on the ground at the start of the temporary roofing mission.

USACE officials have written job descriptions and requirements for both QAs and RoE collectors. USACE officials have created leadership positions to improve communications between more experienced QA personnel and lower-level QA inspectors. In addition, USACE officials have created an RoE collection coordinator to oversee the RoE collection sites. The job descriptions are expected to be included when the 2009 temporary roofing mission standard operating procedures are finalized.

USACE resident engineers are currently working with the Readiness Support Center in Mobile, Alabama, to update QA training. USACE QAs will now have online training before deploying and on-the-job training after deploying to the disaster area. USACE's goal is to have a QA training specialist permanently assigned to each USACE district with a temporary roofing response team to ensure QA training is consistent.

### ***Approval and Implementation of Accident Prevention Plans***

USACE officials did not ensure that contractors submitted an approved APP before beginning work on the temporary roofing mission or that, after approval, the APPs were properly implemented during the 2008 hurricane season. USACE officials reported multiple recurring contractor safety violations during the 2008 USACE temporary roofing mission. Workcrews did not:

- wear fall-protection equipment when required,
- correctly use fall-protection equipment,
- wear hard hats when required,
- have a ground spotter when required,

- properly tie off their ladders, or
- have a fluent English-speaking crew member as required by the contract.

The USACE Safety and Health Requirements Manual, EM 385-1-1, September 15, 2008, prescribes the safety requirements for all USACE activities and operations, and requires contractors to submit an approved APP. Contractor personnel who may be exposed to safety hazards must be trained by knowledgeable personnel in all protection equipment use and safety hazard recognition.

USACE St. Paul District officials and USACE Galveston District officials stated that contractors did not adequately implement an APP during the USACE response to Hurricane Gustav and Hurricane Ike in 2008. As a result, USACE officials could not ensure that all safety hazards and risks were minimized during the temporary roofing mission.

### **Lack of Approved and Sufficiently Implemented Accident Prevention Plans for the 2008 Hurricane Season**

USACE contracting officials did not require one of the temporary roofing contractors to submit an acceptable APP for approval before beginning the roofing mission. Temporary roofing mission contractors are required to address the implementation of safety requirements in their APPs before beginning work. However, one contractor did not submit an approved APP until 38 days after the Hurricane Gustav disaster declaration and 33 days after it began repairing roofs.

USACE officials accepted the contractor's APP in the interim because of the urgent need for temporary roofing; however, the APP lacked sufficient detail. USACE officials required the contractor to submit a revised APP. USACE safety officials reviewed multiple APP submittals and found each to be insufficient. The safety officials noted several common deficiencies and stated the plan did not specifically:

- establish lines of authority,
- identify subcontractors,
- show how the contractor planned to control its subcontractors,
- address the responsibilities of the subcontractors,
- clearly articulate job site training,
- address safety meetings, and
- articulate how safety deficiencies would be tracked or logged.

USACE St. Paul District internal review officials observed the impact these APP deficiencies were having on the implementation of safety at temporary roofing sites. Several workcrews were operating without following the safety guidelines. Figure 3 shows a workcrew preparing to install temporary roofing on a home affected by Hurricane Ike without using the proper safety equipment.





Source: U.S. Army Corps of Engineers

**Figure 3. USACE Roofing Contractors Working on a Two-Story Building Without Any Fall-Protection Equipment**

USACE St. Paul District officials eventually withheld 5 percent from the contractor's second and third payment requests. USACE safety officials found deficiencies in the final APP submittal; however, the officials recommended approval of the APP because the Hurricane Gustav temporary roofing mission was nearing completion. USACE St. Paul District officials paid the two previously withheld payments to the contractor in the fourth payment request.

USACE officials stated that having an approved APP does not minimize safety risks and hazards if the APP is not sufficiently applied to subcontractors and workcrews. The contractors working on the Hurricane Gustav temporary roofing mission had multiple recurring safety violations even with an approved APP. For example, the USACE St. Paul District Safety Officer stated that one contractor did an outstanding job of preparing and submitting an acceptable APP for approval during the Hurricane Gustav temporary roofing mission. However, USACE internal review officials reported safety violations by that contractor during the temporary roofing mission.

USACE Galveston District officials stated that all active contractors had safety violations during the Hurricane Ike temporary roofing mission. USACE internal review officials noted in their reports that some of the contractor workcrew chiefs believed they were not required to follow the safety requirements on roofs, indicating that the contractor did not sufficiently apply the APP to their subcontractors and workcrews. USACE should require all contractors to submit an acceptable APP for approval before work begins on a temporary roofing mission and to apply the approved APP to all subcontractors.

## **USACE's Planned Corrective Action for APP Deficiencies**

A USACE subject matter expert on the temporary roofing mission discussed potential changes to the temporary roofing mission's standard operating procedures and the new ACI contracts that will help correct safety problems for the 2009 hurricane season. The USACE subject matter expert stated that extensive layering of subcontractors leads to the risk of miscommunication and requires more effort when implementing the contract. USACE officials have 17 new contracts in process for the 2009 hurricane season. The new contracts will require the contractors to complete a maximum of 300 roofs per day compared with a maximum of 500 roofs per day in the 2006 ACI contract. In addition, the 2009 ACI contracts will require three to four contractors per affected area, compared with the two contractors specified in the 2006 ACI contracts. Finally, prime contractors will be required to perform 30 percent of temporary roofing work. All of these changes are designed to decrease layering of subcontractors and improve communication with all parties involved with the temporary roofing mission. USACE officials planned changes for the 2009 hurricane season will increase the number of contractors available to perform the temporary roofing mission and give USACE the flexibility to direct RoEs to those contractors who perform within the contract requirements, including compliance with safety requirements.

## ***Administration of the Temporary Power Mission Contract***

The USACE contracting officials involved with the administration of the 2008 temporary power mission were unfamiliar with the ACI Emergency Power Contract. The USACE Pittsburgh District maintains the emergency power contract, including documentation associated with the award process, modifications to the contract, and task orders under the contract. Pittsburgh District officials issued a task order under the emergency power contract to transfer contracting authority to the districts in charge of disaster recovery for the 2008 hurricane season. Contracting officers at the districts in charge of disaster recovery missions handle the contracting actions associated with the temporary power mission following the transfer of authority.

## **Consistency of Contract Actions for the Temporary Power Mission**

During the 2008 hurricane season, the contracting officials at the districts in charge of disaster response did not handle the contracting actions associated with the temporary power mission as the contract directed. Contracting officials from the Philadelphia and Memphis Districts performed contracting functions for the districts in charge because these offices were more familiar with the ACI Emergency Power Contract. However, even though these offices were more familiar with the contracts, they did not maintain adequate contract documentation. Documentation for taskers and necessary signatures on tasker forms were missing from the contract files maintained at the districts in charge of disaster recovery missions. Following the completion of the temporary power mission for Hurricane Gustav, Memphis District contracting officials transferred the contracting files back to the district in charge, St. Paul. The documentation maintained by St. Paul District officials was incomplete because revisions, modifications, and cancellations were not noted separately, and often the initial tasker forms were not included in the contract files.

USACE officials stated that contracting officials at districts in charge of disaster response missions for the 2008 hurricane season were unfamiliar with the terms and conditions of the ACI Emergency Power Contract. According to emergency management and contracting officials the terms and conditions of the ACI Emergency Power Contract can be difficult to understand and implement efficiently and effectively for contracting officers with no previous ACI experience. USACE Pittsburgh District stated that if needed the Pittsburgh District contracting officials can provide contracting assistance because of their knowledge and familiarity with the contract. USACE officials stated that contracting officers with expertise on the ACI contracts could provide the necessary action for a mission that requires an immediate and comprehensive response. Without this expertise, contracting officers at districts in charge of disaster response missions may hesitate to take action in the future or incorrectly perform the functions causing delays or incomplete documentation. USACE should instruct the districts in charge of the emergency power contracts to develop and maintain adequate documentation.

USACE officials also use ACI contracts for the ice and water disaster relief missions, and the contracting duties are consolidated in two districts per mission. These two districts share mission responsibilities for each disaster, allowing the officials in those districts to be both familiar and comfortable with the contracting requirements so the mission can be executed consistently. One district is primarily responsible for the execution of the mission, with the second district assisting. The primary responsibility rotates between the two districts yearly. USACE officials should consider consolidating the administration of the ACI Emergency Power Contract into two USACE districts, as they have with the ice and water ACI contracts, to eliminate confusion and to develop and maintain adequate documentation.

### **USACE's Planned Corrective Action for the Temporary Power Mission Contract Administration Issues**

USACE is aware of the risks it runs by having contracting officers use a contract they are unfamiliar with. USACE is considering establishing a centralized contracting team to consolidate all contracting duties for the ACI Emergency Power Contract. If USACE consolidates all contracting duties associated with the ACI Emergency Power Contract, the risks of delays and incomplete documentation should be reduced. USACE can provide a better coordinated and more consistent emergency power response with a centralized contracting team.

## **Conclusion**

Based on our limited review of the USACE's temporary roofing and temporary power missions for the 2008 hurricane season, we concluded that components of both missions need improvements. All USACE QA personnel performing preliminary and final inspections should be adequately trained and have engineering backgrounds in order to accurately estimate and verify amounts of material needed for the temporary roofing mission. USACE contracting officials should ensure that there is an approved APP submitted and implemented by the contractor before work begins on the temporary roofing mission. USACE needs to ensure complete contract documentation is developed and maintained for the temporary power mission. In addition, the temporary power mission award and administration functions should be further evaluated to determine whether centrally locating the contract administration would improve accountability and efficiency in responding to disasters.

## **Recommendations, Management Comments, and Our Response**

**We recommend that Commander, U.S. Army Corps of Engineers:**

- 1. Adequately train all personnel executing the quality assurance responsibilities for the temporary roofing mission.**

### ***Management Comments***

USACE agreed with the recommendation and stated that it is implementing procedures to improve training for roofing QA personnel. Training will be standardized and provided by designated roofing QA trainers to provide consistency. USACE will require a pre-deployment math test to ensure all personnel, both volunteers and contractors, are capable of performing the job requirements. Additionally, USACE rewrote the duty descriptions to reflect the actual duties of a roofing QA and for the RoE collection process on the temporary roofing mission to allow QA personnel to focus on their primary duties of quality assurance.

### ***Our Response***

The comments were responsive to the recommendation and no additional comments are required.

- 2. Require temporary roofing contractors to have an accepted and properly implemented accident prevention plan before they perform the temporary roofing mission, and to comply with the plan's safety requirements.**

### ***Management Comments***

USACE agreed with the recommendation and stated that USACE will review and approve the contractor's APP prior to commencement of any roofing work. Roofing QA personnel will be trained in fall protection standards and will understand their authority to

stop work if safety standards are not followed. USACE will have the flexibility to terminate contractors for repeat safety violations due to the reduced production of each roofing contractor and increased number of contractors involved.

### ***Our Response***

The comments were responsive to the recommendation and no additional comments are required.

- 3. Instruct districts in charge of the emergency power contracts to develop and retain adequate contract documentation.**

### ***Management Comments***

USACE agreed with the recommendation and stated that USACE Emergency Management staff will remind supported districts to develop and retain adequate contract documentation. USACE revised training to ensure that documentation requirements are known and met, and that adequate contract documentation is retained.

### ***Our Response***

The comments were responsive to the recommendation and no additional comments are required.

- 4. Consider consolidating the award and administration of the temporary power mission's Advance Contracting Initiative contract at two regional or district locations.**

### ***Management Comments***

USACE agreed with the recommendation and stated that a proposal has been made to have the Pittsburgh District serve as the sole agent for all missions, including post declaration. USACE will continue to consider consolidating the award and administration of the temporary power mission's contract at two locations.

### ***Our Response***

The comments were responsive to the recommendation and no additional comments are required.

## Appendix A. Scope and Methodology

We conducted this performance audit from October 2008 through July 2009 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We conducted this audit based on the commitment of the President's Council on Integrity and Efficiency (now known as the Council of Inspectors General on Integrity and Efficiency) to take a proactive approach in reviewing expenditures related to disaster relief efforts. We met and held discussions with officials at USACE Headquarters, Washington, D.C.; USACE Galveston District office, Galveston, Texas; USACE St. Paul District office, St. Paul, Minnesota; USACE Mobile District office, Mobile, Alabama; and USACE Pittsburgh District office, Pittsburgh, Pennsylvania.

We reviewed Federal, DOD, and USACE criteria pertaining to our objectives:

- The Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, and Related Authorities, FEMA 592, June 2007;
- The National Response Framework, January 2008;
- Emergency Support Function #3, "Public Works for Engineering Annex," January 2008;
- Emergency Support Function #6, "Mass Care, Emergency Assistance, Housing, and Human Services Annex," January 2008;
- Emergency Support Function #12, "Energy Annex," January 2008;
- Federal Acquisition Regulation, Part 26, Subpart 26.2, "Disaster or Emergency Assistance Activities";
- Federal Acquisition Regulation 52.216-1, "Type of Contract";
- Army Federal Acquisition Regulation Supplement, Subpart 5117.2, "Options"; and
- Emergency Manual 385-1-1, "Safety and Health Requirements Manual," September 15, 2008.

We held discussions with USACE contracting officials regarding the award and administration of the temporary roofing contracts used during the 2008 hurricane season. We reviewed documentation on both the award and administration process for the contracts. We discussed quality assurance and safety problems identified during our review with USACE emergency management personnel, safety officials, and mission management representatives. We reviewed USACE internal review reports on the temporary roofing mission and discussed the issues with district officials. We also met with Defense Contract Audit Agency officials and discussed their observations of

USACE's temporary roofing mission. We determined that a problem existed with the training of quality assurance personnel but we did not determine the extent of the problem. Due to time constraints, we did not examine the temporary roofing RoEs to verify the estimates or calculations of the USACE QA inspectors or the eligibility of applicants for temporary roofing.

We held discussions with USACE contracting officials regarding the award and administration of the temporary power contract used during the 2008 hurricane season. We reviewed documentation on both the award and administration of the contract. We discussed missing documentation and the current administration procedures with USACE contracting officials and emergency management personnel.

We obtained information related to USACE's implementation of recommendations from previous DOD IG reports: D-2008-037, "U.S. Army Corps of Engineers Administration of Emergency Temporary Roofing Repair Contracts," December 20, 2007, and D-2007-038, "The U.S. Army Corps of Engineers' 'Operation Blue Roof' Project in Response to Hurricane Katrina," December 22, 2006.

Based on our initial review, we divided the project into two subprojects. Project D2009-D000CG-0127.000 is limited to the review of USACE's temporary roofing and temporary power response to the 2008 hurricane season for Hurricanes Gustav and Ike. We limited our scope to the administration of both the temporary roofing mission and the temporary power mission and not the award process. We obtained contract documentation on the award process for both the temporary roofing mission and the temporary power mission but focused our review on the administration of the contracts, with which we identified problems. We issued Report No. D-2009-103, "The U.S. Army Corps of Engineers Ice and Water Response to the 2008 Hurricane Season," on September 18, 2009 to address the USACE ice and water missions. The following table shows the contracts we reviewed for the 2008 hurricane season for the temporary roofing missions, temporary power missions, and administrative assistance.

**Contracts Reviewed for Temporary Roofing, Temporary Power, and  
Administrative Assistance**

Contract	District Awarding the Contract	District Administering the Contract	Contractor
<b>Temporary Roofing Contracts</b>			
W91278-06-D-0028	Mobile, Alabama	St. Paul, Minnesota	Crown Roofing Services, Inc.
W91278-06-D-0047	Mobile, Alabama	St. Paul, Minnesota	S&M and Associates, Inc.
W91278-06-D-0031	Mobile, Alabama	Galveston, Texas	Crown Roofing Services, Inc.
W91278-06-D-0056	Mobile, Alabama	Galveston, Texas	Acme Roofing & Sheet Metal Co., Inc./Industrial Technical Services, LLC Joint Venture
W912HY-09-D-0001	Fort Worth, Texas	Galveston, Texas	American Plastic, Inc.
W912HY-09-D-0002	Fort Worth, Texas	Galveston, Texas	All American Brothers Co., LLC
<b>Temporary Power Contract</b>			
DACW59-03-D-0001	Pittsburgh, Pennsylvania	Philadelphia, Pennsylvania, and Memphis, Tennessee	IAP Worldwide Services
<b>Administrative Assistance Contracts</b>			
W912HY-08-D-0005	Galveston, Texas	Galveston, Texas	Healthy Resources Enterprises, Inc.
W912HY-08-D-0006	Galveston, Texas	Galveston, Texas	Healthy Resources Enterprises, Inc.

## Use of Computer-Processed Data

We did not use computer-processed data to perform this audit.



## Appendix B. Prior Coverage

During the last 5 years, the Government Accountability Office (GAO), DOD IG, the Army Audit Agency, the Naval Audit Service, and the Air Force Audit Agency have issued 38 reports discussing hurricane response by the Department of Defense. Unrestricted GAO reports can be accessed over the Internet at <http://www.gao.gov>. Unrestricted DOD IG reports can be accessed at <http://www.dodig.mil/audit/reports>. Unrestricted Army reports can be accessed from .mil and gao.gov domains over the Internet at <https://www.aaa.army.mil/>. Naval Audit Service reports are unavailable over the Internet. Air Force Audit Agency reports can be accessed from .mil domains over the Internet at <https://www.dmy.af.mil/afknprod/ASPs/cop/Entry.asp?Filter=OO> by those with Common Access Cards who create user accounts.

### **GAO**

GAO Report No. GAO-08-1120, “Disaster Recovery: Past Experiences Offer Insight for Recovering from Hurricanes Ike and Gustav and Other Recent Natural Disasters,” September 26, 2008

GAO Report No. GAO-08-596, “Human Capital: Corps of Engineers Needs to Update Its Workforce Planning Process to More Effectively Address Its Current and Future Workforce Needs,” May 7, 2008

GAO Report No. GAO-07-205, “Hurricane Katrina: Agency Contracting Data Should Be More Complete Regarding Subcontracting Opportunities for Small Businesses,” March 1, 2007

GAO Report No. GAO-06-903, “Coast Guard: Observations on the Preparation, Response, and Recovery Missions Related to Hurricane Katrina,” July 31, 2006

GAO Report No. GAO-06-643, “Hurricane Katrina: Better Plans and Exercises Needed to Guide the Military’s Response to Catastrophic Natural Disasters,” May 15, 2006

GAO Report No. GAO-06-454, “Hurricane Katrina: Army Corps of Engineers Contract for Mississippi Classrooms,” May 1, 2006

### **DOD IG**

DOD IG Report No. D-2009-103, “The U.S. Army Corps of Engineers Ice and Water Response to the 2008 Hurricane Season,” September 18, 2009

DOD IG Report No. D-2008-130, “Approval Process, Tracking, and Financial Management of DoD Disaster Relief Efforts,” September 17, 2008

DOD IG Report No. D-2008-097, “Hurricane Relief Effort Costs on the Navy Construction Capabilities Contract,” May 23, 2008

DOD IG Report No. D-2008-080, “DoD Accounting to Support DoD Personnel During Times of Civil Emergency,” April 25, 2008

DOD IG Report No. D-2008-037, “U.S. Army Corps of Engineers Administration of Emergency Temporary Roofing Repair Contracts,” December 20, 2007

DOD IG Report No. D-2007-121, “Emergency Supplemental Appropriations for DoD Needs Arising From Hurricane Katrina at Selected DoD Components,” September 12, 2007

DOD IG Report No. D-2007-118, “Contract Administration of the Ice Delivery Contract Between International American Products, Worldwide Services and the U.S. Army Corps of Engineers During the Hurricane Katrina Recovery Effort,” August 24, 2007

DOD IG Report No. D-2007-081, “Financial Management of Hurricane Katrina Relief Efforts at the U.S. Army Corps of Engineers,” April 6, 2007

DOD IG Report No. D-2007-055, “Contract Administration of the Water Delivery Contract Between the Lipsey Mountain Spring Water Company and the United States Army Corps of Engineers,” February 5, 2007

DOD IG Report No. D-2007-038, “U.S. Army Corps of Engineers’ ‘Operation Blue Roof’ Project in Response to Hurricane Katrina,” December 22, 2006

DOD IG Report No. D-2007-002, “Logistics: Use of DoD Resources Supporting Hurricane Katrina Disaster,” October 16, 2006

DOD IG Report No. D-2006-118, “Financial Management: Financial Management of Hurricane Katrina Relief Efforts at Selected DoD Components,” September 27, 2006

DOD IG Report No. D-2006-111, “Acquisition: Expanded Micro-Purchase Authority for Purchase Card Transactions Related to Hurricane Katrina,” September 27, 2006

DOD IG Report No. D-2006-116, “Acquisition: Ice Delivery Contracts Between International American Products, Worldwide Services and the U.S. Army Corps of Engineers,” September 26, 2006

DOD IG Report No. D-2006-109, “Acquisition: Response to Congressional Requests on the Water Delivery Contract Between the Lipsey Mountain Spring Water Company and the United States Army Corps of Engineers,” August 29, 2006

## **Army**

Army Audit Agency Report No. A-2008-0192-FFD, "Demolition Contracts: U.S. Army Corps of Engineers," July 24, 2008

Army Audit Agency Report No. A-2007-0162-FFD, "Contract Data Reporting for Hurricane Operations, U.S. Army Corps of Engineers, Washington, DC," June 28, 2007

Army Audit Agency Report No. A-2007-0135-FFD, "Army Fund Accountability for Hurricane Katrina Relief Efforts," June 12, 2007

Army Audit Agency Report No. A-2007-0016-FFD, "Debris Removal Contracts: U.S. Army Corps of Engineers," November 9, 2006

Army Audit Agency Report No. A-2006-0198-FFD, "Contracts for the Hurricane Season Protection Systems in New Orleans: U.S. Army Corps of Engineers, New Orleans District—Task Force Guardian," August 22, 2006

## **Navy**

Naval Audit Service Report No. N2008-0004, "Controls Over Shipbuilding and Conversion, Navy Funds Hurricane Relief Efforts," October 29, 2007

Naval Audit Service Report No. N2007-0039, "Controls and Accountability Over Medical Supplies and Equipment - Hurricane Relief Efforts," June 1, 2007

Naval Audit Service Report No. N2007-0034, "Contractor Support Services in Support of Hurricane Relief Efforts," May 22, 2007

Naval Audit Service Report No. N2007-0021, "Hurricane Relief Funds for Military Family Housing Construction at Gulfport and Stennis Space Center, Mississippi," March 27, 2007

Naval Audit Service Report No. N2007-0016, "Information Systems Restoration and Data Recovery Related to Hurricane Katrina," February 23, 2007

Naval Audit Service Report No. N2007-0009, "Department of the Navy's Use of Hurricane Katrina Relief Funds," January 3, 2007

Naval Audit Service Report No. N2006-0047, "Cash Accountability of Department of the Navy Disbursing Officers for Hurricane Katrina Relief Funds," September 22, 2006

Naval Audit Service Report No. N2006-0042, "Department of the Navy's Government Commercial Purchase Cards used for Hurricane Relief Efforts," August 25, 2006

Naval Audit Service Report No. N2006-0015, "Chartered Cruise Ships," February 16, 2006

## ***Air Force***

Air Force Audit Agency Report No. F2008-0007-FD1000, "Hurricane Disaster Planning," June 4, 2008

Air Force Audit Agency Report No. F2007-0008-FD1000, "Hurricane Katrina Supplemental Funds Management," April 23, 2007

Air Force Audit Agency Report No. F2007-0003-FB1000, "Hurricane Katrina Federal Emergency Management Agency Reimbursements," November 20, 2006

# U.S. Army Corps of Engineers Comments



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
441 G ST. NW  
WASHINGTON, D.C. 20314-1000

CEIR

10 August 2009

MEMORANDUM FOR Inspector General Department of Defense, 400 Army Navy  
Drive, Arlington VA 22202-4704

SUBJECT: USACE Response to OIG Draft Report U.S. Army Corps of Engineers  
Temporary Roofing and Power Response to the 2008 Hurricane Season, 9 July 2009  
(Project D2009-D000CG-0027.000)

1. Reference DODIG Draft Report, SAB.
2. Attached is the HQ USACE reply.
3. My point of contact is Brenda Mayes, [REDACTED] or email at  
[REDACTED]

Encl

*Donna F. Johnson*  
DONNA F. JOHNSON  
Acting Chief Audit Executive  
HQUSACE Internal Review Office

5 August 2009

**Audit Response:**  
**U.S. Army Corps of Engineers Temporary Roofing and**  
**Temporary Power Response to the 2008 Hurricane Season**  
**Project No. D2009-D000CG-0027.000 (Draft Report 9 Jul 09)**

**RECOMMENDATION #1: Adequately train all personnel executing the quality assurance responsibilities for the temporary roofing mission.**

**CONCUR:** The training of Quality Control Inspectors (QAs) was identified by USACE during the remedial action process after the 2008 hurricane season. To improve the training of the Roofing QAs various actions have been taken. There has been a shift to an eight-hour standardized training session by designated Roofing QA Trainers. The training will be consistent regardless of the event. A pre-deployment math test has also been instituted to insure deploying Roofing QAs have the necessary math skills to compute the area calculations. If contracted QAs are used to perform assessments, they will receive the same eight-hour block of instruction and math test prior to being utilized. The training will include various aspects of fall protection safety standards. In addition, the Roofing QA duty description was revised to reflect the actual duties of a Roofing QA on a temporary roofing mission. Additional duty descriptions have also been developed for the ROE collection process to eliminate the need to divert Roofing QAs from their primary duties of quality assurance.

**RECOMMENDATION #2: Require temporary roofing contractors to have an accepted and properly implemented accident prevention plan before they perform the temporary roofing mission and to comply with the plan's safety requirements.**

**CONCUR:** Contractor safety was identified as a concern during the post-season evaluation process. Safety will be addressed at the beginning of the temporary roofing mission and continually monitored during the mission. The ACI Contractor's accident prevention plan will be reviewed and approved prior to commencement of any roofing work. The USACE Roofing QAs will be trained in fall protection standards. Roofing QAs performing Quality Assurance during Construction will understand their authority to stop the work of contractor crews if safety standards are not being followed. Reducing the production of each roofing contractor and increasing the number of contractors involved on a roofing mission will give USACE the flexibility to terminate contractors with continued safety violations.

5 August 2009

**RECOMMENDATION #3: Instruct districts in charge of the emergency power contracts to develop and retain adequate contract documentation.**

**CONCUR:** Pittsburgh District is designated in the HQUSACE All Hazards OP-Order 2009-10, as the responsible district to issue all pre-declaration and no notice emergency declaration task orders to mobilize the contractor staff and perform work for up to a set amount of days. They are also responsible for close-out of these mission assignments from FEMA. They are also designated to coordinate transition of responsibility for follow on task orders with the supported District contracting staff. There is a standing offer to deploy LRP staff forward to assist the supported district in the assumption of post declaration mission responsibilities. This has been discussed at all national cadre meetings where Power was a topic. Emergency managers and senior staff have attended those events and have been made aware of that capability. USACE EM staff at all levels will continue to reinforce the issue to the supported district by reminding them to develop and retain adequate contract documentation. USACE Level II training has been revised to ensure all documentation requirements are fully known and met and that adequate contract documentation is retained.

**RECOMMENDATION #4: Consider consolidating the award and administration of the temporary power mission's Advance Contract Initiative contract at two regional or district locations.**

**CONCUR:** USACE has already implemented a business process of using only the LRP contracting officer to task for all no notice emergency and pre-declaration missions which includes the close-out of those mission assignments. Although two separate Corps entities responsible for contract administration and management of the Power ACI contract could be advantageous, a proposal has been made to have LRP serve as the sole responsible agent for all missions, pre and post declaration. HQUSACE also plans to fund a full-time emergency power Subject Matter Expert to support LRD and USACE that will also be an additional resource that can have impact in spreading this message to the districts that now support post-declaration administration of the contract. USACE will continue to consider consolidating the award and administration of the temporary power mission's contract at two regional or district locations, as well as other alternatives to help USACE better support the survivors of emergencies.







# Inspector General Department of Defense

